

What is Claimed is:

1. A 2-dimensional code formation method comprising:
 - a step of specifying code size for 2-dimensional code;
 - a step of specifying storage information to be written in said 2-dimensional code;
 - a step of setting the cell size for a unit cell of said 2-dimensional code;
 - a step of specifying the dot step size or number of dots $n \times m$ (where n and m are natural numbers) to be arranged vertically and horizontally inside said unit cell;
 - a step of creating laser-marking information based on said code size, said storage information, said cell size and said step size or number of dots; and
 - a step of laser marking said 2-dimensional code based on said laser-marking information.

2. The 2-dimensional code formation method of claim 1 wherein the cell size of said unit cell is changed according to said code size and storage information.

3. The 2-dimensional code formation method of claim 1 wherein the cell size of said unit cell is calculated based on a preset number of cells.

4. A 2-dimensional code formation method, which is a method of forming 2-dimensional code on a product including a single part or a plurality of parts, and comprising:

- a manufacturing-history-information-acquisition step of acquiring manufacturing-history information for a said part;

- a 2-dimensional-code-conversion step of converting data that includes an ID number for identifying manufacturing-history information or includes the manufacturing-history information itself for said part into 2-dimensional code;

a parameter-setting step of setting the size of said converted 2-dimensional code according to said part; and

a laser-marking step of laser marking 2-dimensional code having a set size directly on said part by a laser maker.

5. The 2-dimensional code formation method of claim 4 wherein, in said laser-marking step, said 2-dimensional code is formed based on the size of 2-dimensional code, which was set in said parameter-setting step, by forming: unit cells in which dots that are formed by laser-beam irradiation are arranged vertically and horizontally $n \times m$ (where n and m are natural numbers); unit cells in which a rectangular shape is filled in by continuous laser-beam irradiation; or unit cells that are contained within a rectangular shape by continuous laser-beam irradiation.

6. The 2-dimensional code formation method of claim 4 wherein said laser-marking step includes a process of reading said 2-dimensional code that was laser marked and checking whether or not marking of said 2-dimensional code is correct.

7. A 2-dimensional code formation device comprising:

information-acquisition means for acquiring the code size of 2-dimensional code, storage information that is to be written in said 2-dimensional code, and the step size or number of dots $n \times m$ (where n and m are natural numbers) that are arranged vertically and horizontally inside a unit cell of said 2-dimensional code;

calculation means for performing a process of calculating the cell size of said unit cell based on said code size and storage information, and a process of creating laser-marking information based on said code size, said storage information, said cell size and said step size or number of dots; and

laser-marking means for performing laser marking of 2-dimensional code based on said laser-marking information.

8. The 2-dimensional code formation device of claim 7 wherein said calculation means performs a process of changing the cell size of said unit cell based on change information for said storage information that was acquired by said information-acquisition means.

9. The 2-dimensional code formation device of claim 7 wherein said calculation means performs a process of creating different laser-marking information based on change information for said step size or number of dots that was acquired by said information-acquisition means.

10. A 2-dimensional code formation device comprising:
information-acquisition means for acquiring the code size of 2-dimensional code, storage information that is to be written in said 2-dimensional code, the number of unit cells of said 2-dimensional code, and the dot step size or number of dots $n \times m$ (where n and m are natural numbers) arranged vertically and horizontally inside a unit cell of said 2-dimensional code;

calculation means for performing a process of calculating the cell size based on said code size and number of cells, and a process of creating laser-marking information based on said code size, said storage information, said cell size, and said dot step size or number of dots; and

laser-marking means for performing laser marking of 2-dimensional code based on said laser-marking information.

11. The 2-dimensional code formation device of claim 10 wherein said calculation means performs a process of changing the said cell size of unit cells based on change information for said number of cells that was acquired by said information-acquisition means.

12. The 2-dimensional code formation device of claim 10 wherein said calculation means performs a process of creating different laser-marking

information based on change information for said step size or number of dots that was acquired by said information-acquisition means.

13. A 2-dimensional code formation device that forms 2-dimensional code on a product that is made from a single part or a plurality of parts, and comprising:

means for acquiring manufacturing-history information for the part/parts of a product;

means for storing the acquired manufacturing-history information;

means for converting data, which includes an ID number identifying said manufacturing-history information, or includes said manufacturing-history information itself, to 2-dimensional code; and

means for performing laser marking of 2-dimensional code directly on the part/parts based on the size of 2-dimensional data that was set for the part/parts.